

### **Listing of Claims**

This listing of claims will replace all previous versions and listing of claims in the application.

1. (Previously Presented) A bone-powder-impregnated, porous structure comprising a porous matrix made of a biocompatible material impregnated with fine bone powder obtained by pulverizing living bones and/or teeth, wherein the fine bone powder comprises sub-micron particles.

2. (Previously Presented) The bone-powder-impregnated, porous structure according to claim 1, wherein it has fine communicating pores having an average diameter of 0.005-50  $\mu\text{m}$  in its entire body, said fine communicating pores being open on an outer surface of said porous structure at a density of 1 or more pores per an area of 50  $\mu\text{m} \times 50 \mu\text{m}$ .

3. (Withdrawn) The bone-powder-impregnated, porous structure according to claim 1, wherein it has communicating macro-pores having an average diameter of 100-1000  $\mu\text{m}$  in its entire body, which are open on an outer surface of said porous structure at a density of 1 or more per an area of 1000  $\mu\text{m} \times 1000 \mu\text{m}$ , and fine communicating pores having an average diameter of 0.005-50  $\mu\text{m}$ , which are open on inner walls of said communicating macro-pores at a density of 1 or more pores per an area of 50  $\mu\text{m} \times 50 \mu\text{m}$ .

4. (Withdrawn) The bone-powder-impregnated, porous structure according to claim 1, wherein it has communicating macro-pores having an average diameter of 100-1000  $\mu\text{m}$  in its entire body, which are open on an outer surface of said porous structure at a density of 1 or more per an area of 1000  $\mu\text{m} \times 1000 \mu\text{m}$ , and fine recesses having an average diameter of 0.005-50  $\mu\text{m}$  and an average depth of 0.005-50  $\mu\text{m}$ , which are open on inner walls of said communicating macro-pores at a density of 1 or more pores per an area of 50  $\mu\text{m} \times 50 \mu\text{m}$ .

5. (Previously Presented) The bone-powder-impregnated, porous structure according to claim 1, wherein said biocompatible material is at least one selected from the group consisting of ceramics, metals, and polymers.

6. (Original) The bone-powder-impregnated, porous structure according to claim 5, wherein said ceramics are calcium phosphate ceramics.

Claims 7., 8. (Canceled)

9. (Previously Presented) The bone-powder-impregnated, porous structure according to claim 1, wherein said fine bone powder has an average diameter of 50  $\mu\text{m}$  or less.

10. (Previously Presented) The bone-powder-impregnated, porous structure according to claim 1, wherein the entire structure is porous.

11. (Withdrawn) The bone-powder-impregnated, porous structure according to claim 1, wherein only a surface layer of said structure is porous.

12. (Withdrawn) A method for producing a bone-powder-impregnated, porous structure comprising a porous matrix made of a biocompatible material impregnated with fine bone powder, wherein the fine bone powder comprises sub-micron particles, said method comprising the steps of preparing said fine bone powder, and impregnating said porous structure with said fine bone powder.

13. (Withdrawn) The method for producing a bone-powder-impregnated, porous structure according to claim 12, wherein said porous structure is impregnated with fine bone powder in the form of a suspension.

14. (Original) An artificial bone comprising the bone-powder-impregnated, porous structure recited in claim 10.

15. (Withdrawn) An artificial bone comprising the bone-powder-impregnated, porous structure recited in claim 11.

16. (Withdrawn) An artificial dental root comprising the bone-powder-impregnated, porous structure recited in claim 11.

17. (Previously Presented) A bone-powder-impregnated, surface-roughened structure comprising a surface-roughened matrix made of a biocompatible material, which is impregnated with fine bone powder obtained by pulverizing living bones and/or teeth, wherein the fine bone powder comprises sub-micron particles.

18. (Previously Presented) The bone-powder-impregnated, surface-roughened structure according to claim 17, wherein said surface-roughened structure has fine recesses having an average diameter of 0.005-50  $\mu\text{m}$  and an average depth of 0.005-50  $\mu\text{m}$ , which are open on its entire outer surface at a density of 1 or more pores per an area of 50  $\mu\text{m} \times 50 \mu\text{m}$ .

19. (Previously Presented) The bone-powder-impregnated, surface-roughened structure according to claim 17, wherein said biocompatible material is at least one selected from the group consisting of ceramics, metals, and polymers.

Claims 20., 21. (Canceled)

22. (Previously Presented) The bone-powder-impregnated, surface-roughened structure according to claim 17, wherein said fine bone powder has an average diameter of 50  $\mu\text{m}$  or less.

23. (Withdrawn) A method for producing a bone-powder-impregnated, surface-roughened structure comprising a surface-roughened matrix made of a biocompatible material, which is impregnated with fine bone powder, wherein the fine bone powder comprises sub-micron particles, said method comprising the steps of preparing said fine bone powder, and impregnating said surface-roughened structure with said fine bone powder.

24. (Withdrawn) The method for producing a bone-powder-impregnated, surface-roughened structure according to claim 23, wherein a rough surface of said surface-roughened structure is impregnated with fine bone powder in the form of a suspension.

25. (Previously Presented) An artificial bone comprising the bone-powder-impregnated, surface-roughened structure recited in claim 17.

26. (Previously Presented) An artificial dental root comprising the bone-powder-impregnated, surface-roughened structure recited in claim 17.

27. (Previously Presented) The bone-powder-impregnated, porous structure according to claim 1, wherein said fine bone powder is provided from autologous bone.

28. (Previously Presented) The bone-powder-impregnated, surface-roughened structure according to claim 17, wherein said fine bone powder is provided from autologous bone.